

AFGHANISTAN



FUSION CELL

USCENTCOM

27675

STINGER: ONE YEAR OF  
COMBAT



DATE OF DOCUMENT: 26 OCT 87

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CCCS-F

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FOREWORD

(U) This document is the product of the Afghan Fusion Cell and does not necessarily represent the official views of the Department of Defense, JCS, or USCENTCOM. Comments and questions regarding this study are welcome and should be addressed to USCENTCOM Fusion Cell AV 968-6580/6568, KY 9287/9279, Grey 991-6172.

THOMAS A. LOKEN  
Colonel, USAF  
Chief, Afghan Fusion Cell

## INTRODUCTION

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#### **PART I - STINGER MISSILE SYSTEM**

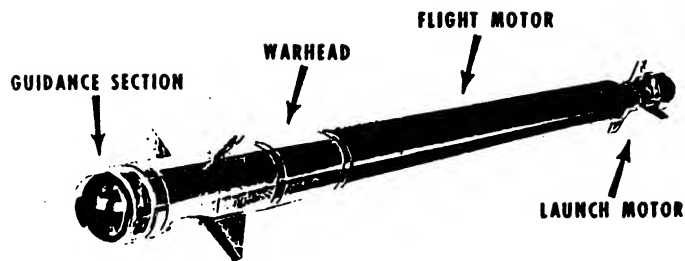
Stinger is a lightweight, manportable, shoulder-fired air defense system capable of engaging and destroying low altitude high-performance fixed-wing aircraft, slower fixed wing aircraft, and helicopters. It uses an infrared (IR) homing missile; provides a fire and forget capability; is easily transportable and provides responsive and effective engagement. The version used by the Mujahedin has four parts and is described below:

**LAUNCH TUBE ASSEMBLY** - A transparent IR disc in the forward end and a frangible disc in the aft end of the assembly environmentally seals the launch tube to protect the missile. Both discs are expended at launch. The sight assembly, mounted in the forward end of the tube, is used to aim the weapon, estimate target range, superelevate to proper angle, and correctly lead the target prior to firing. After missile firing the launch tube assembly is discarded.

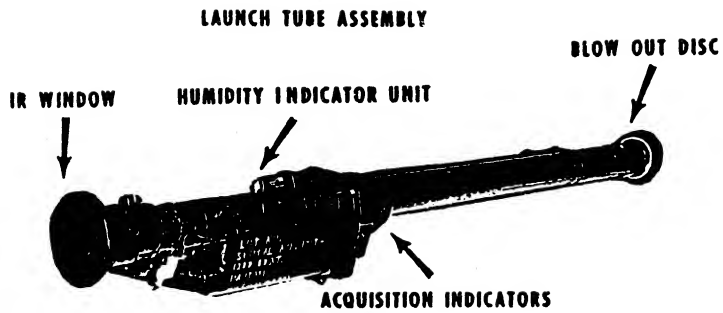
**GRIPSTOCK/CONTROL GROUP** - The gripstock contains all circuitry and assemblies for prelaunch operations. It is reusable and attached to the launch tube by means of a metal latch. The identification friend or foe (IFF) antenna is also attached to the gripstock. (Note: This feature is not used in Afghanistan.)

**BATTERY COOLANT UNIT (BCU)** - The BCU contains the thermal battery and argon gas coolant. When inserted into the gripstock receptive and activated, the BCU will provide 45 seconds of electrical power for launch operation. It also provides argon

# STINGER MISSILE







**GRIPSTOCK**

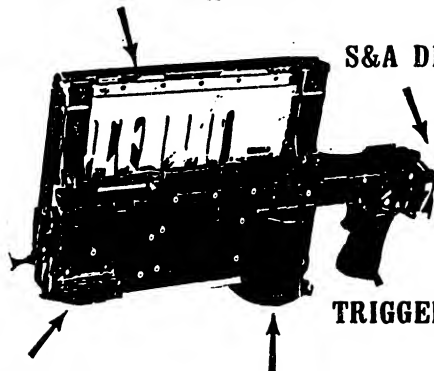
**IFF ANTENNA**

**S&A DEVICE**

**TRIGGER**

**UNCAGING**

**BCU**



## BATTERY COOLANT UNIT



gas coolant to the IR detector in the missile seeker. The BCU is expended whenever the weapon is activated even if missile firing does not occur.

## **PART II - STINGER CHARACTERISTICS AND AFGHANISTAN**

Stinger is a durable and reliable missile system which has performed well in difficult terrain and varied weather phenomenon found throughout Afghanistan. Bitter cold temperatures in winter months followed by extremely high temperatures during summer months expose both men and equipment to weather extremes. Prevailing high winds in the western portion of the country are accompanied by blowing sand or snow. Steep, rugged terrain in Afghanistan makes cross-country travel on foot or horseback difficult. Even in these adverse situations, the characteristics of the Stinger missile system make it ideal for fighting the Soviets.

Ease of transportation of a weapon system is an important consideration in Afghanistan because vehicular movement by Mujahedin forces is not always possible. The total weight of the Stinger system at firing is only 34.5 lbs; a strap is included with the launch tube assembly which allows the gunner to carry it over his shoulder. CBS film footage of combat action in Afghanistan showed a Mujahedin carrying a Stinger over his shoulder while he was traversing difficult terrain on horseback. Utilizing the strap keeps the missile in a combat ready position while it frees the gunner's hands. (Note: Minimum reaction time

is approximately 5 seconds.)

Another consideration is the durability of a particular system. The Stinger is capable of withstanding drops from seven feet when in its shipping case. The launch tube assembly is capable of withstanding a two foot drop. Mujahedin resupply convoys often position Stingers ahead and behind the main element to provide protection. Additional Stingers are usually kept in their wooden shipping containers and loaded on pack animals or vehicles. The launch tube is environmentally sealed and protected against moisture and foreign matter. The operating temperature range of the Stinger is -40 to +140 degrees Fahrenheit and the storage range is between -60 and +160 degrees Fahrenheit. Prolonged storage does not appear to have a negative effect on its performance. The BCU, the power source required to activate the Stinger, has a shelf life of at least 10 years with a reliability rate of 98-99%.

### **PART III - STINGER VERSUS THE REDEYE/SA-7**

Although the Mujahedin clearly prefer the Stinger, the SA-7 will still be utilized in Afghanistan. It is produced in two countries and employed by at least 45 and is readily available. Probably because it is extremely difficult for pilots to differentiate between shoulder-fired SAMs, Soviet pilots appear to treat all launches as Stinger. In numerous instances it has been noted that Soviet aircraft will depart an area as soon as a SAM is fired. The exception seems to be for search and rescue operations (SAR).

**PART IV - OPERATING INSTRUCTIONS AND CHARACTERISTICS**

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**PART V - TACTICAL IMPACT OF STINGER IN AFGHANISTAN**

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**PART VI - SUMMARY**

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